PATENT COOPERATION TREATY

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference FP0276PC-NT			FOR FURTHER A	CTION	See Form PCT/IPEA/416			
International application No.			International filing da	te (day/month/year)	Priority date (day/month/year)			
PCT/JP2004/007392			28.05.2004	4	29.05.2003			
			onal classification and	IPC				
Applicant				,				
NGK SP	ARK PLUG	CO., I	LTD.					
 This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 								
2. This	REPORT consists	of a total of	5	sheets, includi	ing this cover sheet.			
3. This	report is also accor	mpanied by Al	NNEXES, comprising:					
a. [2	(sent to the	applicant and	to the International Bu	reau) a total of 2	sheets, as follows:			
	a. (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows: sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).							
	sheets the dis	which supers sclosure in the	ede earlier sheets, but e international applicat	which this Authority co ion as filed, as indicate	onsiders contain an amendment that goes beyond and in item 4 of Box No. I and the Supplemental			
, F	_	International	Rureau only) a total of	(indicate type and numb	per of electronic carrier(s))			
υ. [(sem to the	armerialityilli	on can omy, a total of					
			readable form only, a	s indicated in the Supp	, containing a sequence listing and/or tables lemental Box Relating to Sequence Listing (see			
4. This	report contains ind	lications relati	ng to the following iter	ns:				
\boxtimes	Box No. I	Basis of the	report					
$\overline{\boxtimes}$	Box No. II	Priority	-					
	Box No. III		shment of opinion with	n regard to novelty, inve	ntive step and industrial applicability			
	Box No. IV		_	11				
	Box No. IV Lack of unity of invention Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement							
	Box No. VI	Certain doc	uments cited					
	Box No. VII	Certain defe	ects in the international	application				
Box No. VIII Certain observations on the international application								
Date of submission of the demand Date of completion of this report								
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Name and mailing address of the IPEA/JP			<u></u> - 4	Authorized officer				
Paratastia Ma				Telephone No.				

 $r^{\alpha_1} \cdot r_{r,\alpha_2} \cdot 1$

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Box	No. I	Basis of the report						
1.		gard to the language, this report is based on the internation d under this item.	al application in the language in which it was filed, unless otherwise					
	This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of: international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.4)							
2.	With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):							
	∇	ne international application as originally filed/furnished ne description:						
	-	ages <u>1-21</u>						
		ages*						
		ne claims:	as originally filed/furnished					
		05. 2-4,13						
			received by this Authority on 26.01.2005					
		os.*						
	1	ne drawings:						
			as originally filed/furnished					
	sl		received by this Authority on					
	sl	heets*	received by this Authority on					
	Па	sequence listing and/or any related table(s) - see Supplem	ental Box Relating to Sequence Listing.					
3.	⊠ т	the amendments have resulted in the cancellation of:						
		the description, pages						
	\triangleright	the claims, nos. 5						
		the drawings, sheets/figs						
		the sequence listing (specify):						
		any table(s) related to sequence listing (specify):						
4.		this report has been established as if (some of) the amend hey have been considered to go beyond the disclosure.as file	ments annexed to this report and listed below had not been made, since ed, as indicated in the Supplemental Box (Rule 70.2(c)).					
	Ļ	the description, pages						
	Ļ	the claims, nos.						
	Ļ	the drawings, sheets/figs						
	Ļ	the sequence listing (specify):						
	L	any table(s) related to sequence listing (specify):						
*	* If item 4 applies, some or all of those sheets may be marked "superseded."							

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Box	No. II Priority
1.	This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
	copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
	translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2.	This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3.	Additional observations, if necessary:
	Document JP 2003-153426 A, which is the prior
	application forming the basis for the claim of priority,
	does not disclose in the initial description the feature
	of the inclusion of Sb in the piezoelectric ceramic
	composition or the feature of substituting a portion of
	the Nb with the aforementioned Sb, which are set forth in
	the description of the present application. Therefore,
	the claim for priority cannot be accepted with respect to
	these features.

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Box	Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement					
1.	Statement					
	Novelty (N)	Claims 1-4, 6-14	YES			
		Claims	_ NO			
	Inventive step (IS)	Claims 1-4, 6-14	YES			
<i>/</i> -		Claims	_ NO			
	Industrial applicability (IA)	Claims 1-4, 6-14	YES			
		Claims	_ NO			
2.	Citations and evaluations (Pule	70.7\				
2.	Citations and explanations (Rule 70.7) Document 1: JP 2001-240471 A (Kyocera Corp.), 04					
	Document 1:	September 2001 (04.09.01), claims;				
		paragraphs [0020] to [0028], [0041] to				
		[0046]; tables 1 to 3				
	Decument 2.	JP 11-228227 A (Murata Mfg. Co., Ltd.),				
	Document 2:	24 August 1999 (24.08.99), claims;				
		paragraphs [0001], [0010], [0011];				
	Danimanh 2.	table 1				
	Document 3:	JP 11-228225 A (Murata Mfg. Co., Ltd.),				
		24 August 1999 (24.08.99), claims;				
		paragraphs [0001], [0011], [0012]; tables				
	5	1, 2				
	Document 4:	JP 2002-255641 A (Kyocera Corp.), 11				
		September, 2002 (11.09.02), claims;				
		examples; tables 1, 2 (Family: none)				
	Document 5:	JP 11-240750 1 (Kyocera Corp.), 07				
		September 1999 (07.09.99), claims;				
		paragraphs [0025], [0031] (Family: none)				
	Document 6:	JP 2002-68835 A (Toyota Central Research				
		And Development Laboratories, Inc.), 08				
		March 2002 (08.03.02), claims; paragraphs				
		[0025]				
	Document 7:	JP 2001-342065 A (Matsushita Electric				

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Industrial Co., Ltd.), 11 December 2001

(11.12.01), claims; Paragraphs [0014] to

[0016]

Document 8:

JP 2003-206179 A (TDK Corp.), 22 July

2003 (22.07.03), claims

Claims 1-4 and 6-14

The inventions set forth in claims 1-4 and 6-14 involve an inventive step in relation to the documents cited in the international search report. None of documents 1-8 discloses the piezoelectric ceramic composition of the invention set forth in claim 1.

Moreover, it would not be easy for a person skilled in the art to conceive of this invention. The inventions set forth in claims 2-4 and 6-14 have the piezoelectric ceramic composition set forth in claim 1 as the matter defining the invention.